Cir. No. 35 H
1,000—March, 1939 (M4804)

OHEC
371.14609713
059DE/S

Ontario Department of Education

SYLLABUS

OF

SUMMER COURSES AND EXAMINATIONS

FOR

The Elementary Certificate Type B

IN

Manual Training

1939

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO
Printed by T. E. Bowman, Printer to the King's Most Excellent Majesty
1939

COURSE OF STUDY LEADING TO THE ELEMENTARY MANUAL TRAINING CERTIFICATE

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1. Length of Course:

The course shall consist of two parts, of 125 clock hours each. Part I shall be taken before Part II.

2. Objects of the Course:

(a) To provide training for the teacher conducting Manual Training in a rural school.

(b) To assist the Auxiliary class teacher to develop and perfect the handwork which forms a large part of his curriculum.

(c) To provide the regular grade teacher with a background of handwork experiences for the enrichment of the regular curriculum.

Notes—

(1) The Elementary Manual Training Certificate, Type B, is accepted in lieu of two of the university subjects that are required for the Permanent First Class Certificate (see Circular 72).

(2) The Elementary Certificate, either Type A or Type B, is required for admission to the one year course leading to the Intermediate Certificate.

3. Requirements for Admission:

Teachers who hold at least a Second Class Certificate may be admitted to the course.

4. Applications for Admission:

Application for admission shall be made on an official form to be obtained from the Deputy Minister.

PART I

SUBJECTS OF STUDY

1. Constructive Work (40 Clock Hours)

The constructive work in the several media to be correlated with the Programme of Studies for the Public and Separate Schools, particularly for Grades I to VI. Skill in handling the media, neatness and accuracy to be stressed. Opportunity for originality on the part of those taking the course to be provided.

A. Paper Work:

Freehand cutting and mounting of coloured paper, for purpose of recognition, of trees, leaves, flowers, fruits, etc. Tracing on coloured papers from mimeographed or hectographed sheets objects too difficult for the child of the grade to draw. These to be cut and suitably mounted to illustrate topics historical, geographical, or of natural science. Making of designs, borders, or patterns from paper folding in 4, 5, or 6 units, and using them in decoration of the models made in cardboard.

B. Cardboard Work:

Simple models in light and heavy weight cardboard suitable for grades from III to VI, involving measurements in fractions of the inch. Cardboard models of all kinds to be used on the sandtable, (a) type solids as the cube, prisms, pyramids, cylinders, cones, from geometrical layouts (b) combinations of these units into barns, houses, silos, windmills, churches, lighthouses, castles, etc., (c) cardboard models showing homes, dress, occupations, means of travel of people of other lands.

C. Bookbinding:

Making of portfolio and book covers, binding of magazines and other simple repairs to books of the school library.

D. Modelling and Design:

Plasticine, clay, soap, salt and flour used. Basic principles of modelling reviewed followed by the moulding in the plastic material applied to lessons in social studies, natural science, health, etc. Relief maps, scenes, birds, animals, etc., modelled from salt and flour or coloured plasticine. Carving from soap, leaves, fruit, vegetables, animals, birds, busts, etc.

E. Linoleum Block Work:

Materials and equipment and how procured. The preparation of the block for printing, printing using printer's ink or prepared linoleum block ink, trimming and mounting the prints as cards, book covers, borders, decoration for models, etc.

F. Weaving:

Paper, cord, wool, reed, raffia used. In basketry the making of baskets, trays, serviette rings, etc.

G. Rope Work:

Things suitable to the Rural centre as the rope halter involving the crown and tuck, eye within the rope and eye at the end of the rope. The long and short splice and knots of practical use in everyday life will also be taught. (See O.A.C. Bulletin No. 327, 137.)

2. Woodwork (70 Clock Hours)

The woodwork of this part restricted to models executed in the common and more easily-worked woods, and requiring for the most part the tools shown in the Special Provisions of the Manual Training Regulations. Models closely related to the content of the school curriculum and based on the real needs of the pupils. The development of satisfactory tool habits.

A. Coping Saw Work, Thin and Strip Woodwork (25 Clock Hours):

Toys, toy furniture, map or picture puzzles, curve templates, models depicting farm life, birds, animals, objects descriptive of and pertinent to foreign countries. (One of each type)

From prepared strip materials, simple objects such as model step-ladders, straight ladders with rungs notched with knife or chisel, toys, plant trellises, gates, fences.

Objects in thin wood such as pencil sharpener, plant label, match scratcher, pencil box, nail box, corner bracket, weaving frame.

B. Simple Bench Tool Operations:

Models involving squaring stock, the butt joint (face to face, edge to face and end to face) the dado joint, the rabbet joint, the cross half-lap joint, the dowel joint. The models include a mitre box, a coping saw jack, a bench hook. Other articles for the house, farm or school, such as nail boxes, shelves, book ends, book racks, bird houses (plain and rustic material), shooting board, etc.

C. Wood Finishing:

Sandpapering, filling, staining, shellacking, painting and enamelling as required for models made during the course.

The importance of a thoroughly tooled surfaced before the application of sandpaper to be stressed.

D. Materials and Tools:

The study of timber and the woods in common use, distinguishing characteristic defects found in lumber, (shakes, checks, knots, rot). Methods of seasoning and storing lumber.

Selection and preparation of materials used in finishing, and the care of brushes.

Wood fastening devices — nails, screws, glue, etc.

A thorough study of the parts, adjustments and care of the bench tools and of such other tools as may be required in the construction of the models. Particular attention given to the selection of the necessary tools and materials and the trade method of ordering the same.

E. Shop Practice:

The students to practise from the outset good shop procedures. Attention directed to the systematic daily care and check up of equipment and accommodation, to economic use of materials and supplies and to suitable means of dealing with scrap and salvage material and the disposal and storage of unfinished projects, etc.

3. Mechanical Drawing (15 Clock Hours)

Geometrical layouts, stretch out patterns and the like applied directly as each occurs in the constructive work and woodwork. Formal instruction in mechanical drawing devoted to (1) a study of orthographic projection as required for interpreting and making the simple two and three-view drawings, (2) the oblique method of pictorial representation. Emphasis placed on the making of neat freehand dimensioned sketches drawn to scale. The drafting conventions of the American Standards Association with respect to arrangement of views, linework, dimensioning, and lettering. About ten drawings made.

4. Organization and Methods

Covered incidentally in connection with the other work. The formal discussion of this topic deferred till Part II. Attention drawn to the possibilities of using suitable salvage material such as packing boxes, tea boxes, cigar boxes, orange crates, wall paper, shingles, etc.

STANDING OF STUDENTS

The final standing of the students will be determined by:

(1) Valuation of term's work under the following headings—

	Maximum	Minimum
Constructive Work	100	60
Woodwork	100	60
Shop Practice	100	60
Mechanical Drawing	100	60
(2) Examinations in—		
Constructive Work	100	50
Materials and Tools	100	50
Mechanical Drawing	100	50

PART II

SUBJECTS OF STUDY

1. Shopwork (90 Clock Hours)

A. Bench Woodwork:

Models demanding a higher degree of hand skill and care in tool manipulation and practice requiring additional joints such as mitre, mortise and tenon, dovetail, and the various modifications and combinations. Models may include equipment for use in shop or classroom.

Some experience in the use of such tools as auger and centre bits, rabbet and dado planes, router, compass saw, spokeshave, cabinet-scraper, hand-clamps, G clamps and bar clamps.

Chip carving for decorative purposes applied to appropriate models.

B. Wood Finishing:

An extension of the work in Part I. Polishing and the choice and preparation of polishing materials to be stressed.

Finishes: oil, shellac, French polish and wax.

Touching up marred finishes.

C. Metal Work (25 Clock Hours):

Decorative devices in copper, brass and iron for application to the models made and to provide elementary experiences in cutting, filing, bending, soldering, rivetting, etching. The work to include such things as simple box corners, escutcheon plates, hinges, name plates, numerals, whisk holders. Simple domestic articles of tin plate.

D. Materials and Tools (10 Clock Hours):

Selection and identification of suitable material for the models; warping in wood, cause, prevention and correction; quarter cut lumber; sources of the commonly used woods; bulletins and books issued by the Department of Forestry. A display board of typical samples of the more commonly used woods to be prepared by each student.

Specifying, ordering and costs of other materials such as copper, brass, tin plate, solder, glue, nails, brads, screws, finishing materials, etc., as used in the projects.

Further attention to the tools used in Part I as well as a study in the care and operation of the additional tools now required. Specific practice in sharpening and reconditioning such tools as chisels, plane irons and cabinet scrapers. Careful attention directed to the development of correct tool using habits. The history and development of the standard tools.

E. Household Mechanics:

As opportunities occur, attention directed to simple household jobs and repairs such as, wiring a lamp, repairing an extension cord, glazing a sash, hanging a door, hanging pictures, cabinets, book shelves to walls, installing screens, gluing furniture, touching up marred finishes.

F. Shop Practice:

As in Part I, the strict observance of satisfactory shop practices. Attention directed to the proper stacking and storing of materials, unfinished and finished projects, to the economical use of materials, to the value of time, to the arrangement of tools and equipment, etc. The instructor's rating of each student in shop practice to be an important part of the final standing.

2. Mechanical Drawing

A formal course in drawing not included in this part. Sketches and drawings made in connection with the shop work and the course of study work. Incidental instruction provided where necessary. The general principles of sectioning, making bills of materials, the isometric drawing, architectural indications. A final examination to be provided in this subject.

3. Courses of Study, Equipment Lists, Budgets, Etc. (25 Clock Hours)

Consideration given to the kinds of projects suitable for including in manual training courses. An outline of a course of study prepared in terms of tools, operations, materials and related content. Drawings and sketches of the models of the course of study.

Each student to complete the following exercises in terms of the situation in his school. Where necessary typical situations assigned to students without schools.

(i) An extension of the minimum equipment list shown in the Special Provisions of the Manual Training Regulations. Sketches of work benches and cupboards.

(ii) A floor plan of suitable manual training accommodations.

(iii) An annual budget, showing the quantities and varieties of material required, together with the costs of the same.

4. Theory and Methods (10 Clock Hours)

A. General:

Aims, integration and correlation with other subjects, seat and busy work, application of the general method of teaching to manual training, group and individual instruction.

B. Special Problems in Rural Schools:

Introduction, accommodations, equipment, supplies, organization of school, handling several grades, maintenance, discipline, government grants and regulations.

STANDING

The final standing of the students will be determined by—

(1) Valuation of term's work under the following headings:

	Maximum	Minimum
Woodwork	100	60
Metal Work	100	60
Shop Practice	100	60
Course of Study, etc.	100	60
(2) Examinations in:		
Materials and Tools	100	50
Drawing and Design	100	50
Theory and Methods	100	50